

"WOMAN'S ROLE IN A CHANGING WORLD"

Dr. Wernher von Braun  
Director, Development Operations Division  
Army Ballistic Missile Agency  
US Army Ordnance Missile Command  
Redstone Arsenal  
Huntsville, Alabama

Women's Forum on National Security  
Washington, D. C.  
30 January 1959

I count it a singular privilege to have the opportunity of addressing this distinguished Forum representing 3,000,000 women citizens. You are to be commended for your continuing interest in national security, for the lack of which such meetings as this might not be possible. Only by the wise use of our cherished freedoms can we preserve the America which is the shining hope of mankind.

The theme you have selected for this Forum, "Changing Dimensions in National Security," is a timely one. It would be impossible to isolate any single dimension of security which has not been substantially altered by the swift progress of science and technology. Your purpose of evaluating the impact of the Space Age upon our society is likewise in tune with the needs of the hour.

MORE

Until quite recently practically all human activity in military, educational, social and governmental affairs was primarily related to earthbound concepts. In scientific areas my colleagues would argue that some investigations had other than earthly connotations. I am sure also that men of the cloth would say their concern is not limited to earthly matters. But in general our thinking and, in fact our entire existence, has been rooted in the Earth.

We have abruptly entered upon an era in which men must try to release their imaginations to the contemplation of limitless distances and worlds beyond our own, to new phenomena which have no counterpart on Earth, all of which have suddenly been brought much closer by the medium of rocketry. It is entirely logical, therefore, that you should be seeking answers to questions inspired by these events and which concern all of us. I suggest you consider, as Mr. Jacobowski said to the Colonel, that "there are always two possibilities." The possibilities in national security might be stated in these terms:

First--accepting the definition of security as "freedom from danger," we must seek to achieve that objective by eliminating the danger.

Second--if we find that we cannot eliminate the threat, then we must take every precaution to insure that our protection is adequate in all circumstances.

The statement of these alternatives presupposes the desire and the determination to achieve security. I am not sure that we can blithely pass over that supposition. There may be need to take a critical look at what we are doing, or failing to do, to remind our

MORE

people that freedoms such as we enjoy were not easily bought and that compared with the kind of existence offered by rival ideologies, they are worth preserving. Like many others who chose American citizenship voluntarily and who experienced the heavy hand of totalitarianism, I am perhaps inclined to take these matters more seriously than those who enjoy them by birthright.

The problem of adequate security is complicated by the fact that it cannot, in an era dominated by technology, be a passive state. It must be treated as a constantly changing situation directly influenced by technological progress. The weapon system which strengthened our security yesterday may be obsolete today. Scientific discoveries may render useless future weapons now on the drawing boards before ever they reach the field. Time and space factors have been almost eliminated by the combination of massive destructive potential, in the form of thermonuclear energy, and automatic delivery systems in the shape of giant ballistic missiles. When any point on Earth can be utterly devastated within the space of minutes, the dimensions of adequate defense must differ radically from the means familiar to us. Traditional concepts of offense and defense are scarcely applicable as we move further into the Age of Space.

It seems obvious, then, that the awesome forces available to man render the first of our alternatives much more difficult of achievement. The question of effective disarmament becomes relative when it is weighed against the possibilities inherent in the advance of technology.

I might clarify this point by the following illustration. Suppose that your daily newspaper reported a new satellite was orbiting the Earth and crossing this continent with monotonous regularity. Its trajectory carried it over major centers of population, great industrial

MORE

complexes, seaports and military bases. This sort of thing has occurred within the year so it does not require any stretch of imagination to expect it to be repeated.

To carry the moral further, suppose that the satellite carries electronic devices and transmission equipment by which it reports visually to the base from which it was launched everything that it "sees." Under such conditions, how much secrecy remains to us in the conduct of large-scale defensive operations? This is an entirely hypothetical exercise intended only to demonstrate what might happen. But I must point out that it is entirely practicable so far as the mechanics are concerned. Rockets capable of injecting such satellites are available behind the Iron Curtain as well as in this country. We have seen evidence that earth-circling orbiters can survive for days, weeks, even years. We demonstrated two-way communications with an EXPLORER satellite, the large ATLAS satellite dramatically pointed up the possibilities, and we must assume that the Russians have a like capability.

The mechanics of disarmament are much more complex than was the case in the 1920s or in the years following World War II. A nation covetous of others might subscribe to the reduction of conventional armaments and make a good show of it. Thus the danger of war in recognizable guise might seem to be reduced, but the same power could under the mask of scientific research and development, retain the potential for destruction and conquest by the use of space vehicles for these ends. The long-range ballistic missile, in modified form, becomes the carrier by which to propel objects into space.

MORE

This is not intended to suggest that we should abandon our sincere efforts to achieve universal disarmament. Any practical means of reducing the burden of defense expenditures, or relieving men from the liability for compulsory military service which is still commonly practiced in many countries, should be explored with all the vigor we can muster. But it is apparent that we cannot achieve a state of complete freedom from danger, however desirable it may be, until men everywhere have convincingly demonstrated their good will and their intention to live together in amity, renouncing aggressive designs upon their neighbors. Until that day dawns the second alternative is the only course open to us--to protect this country against any conceivable threat.

I emphasize the term "any threat" purposefully for we must realize that the threat confronting us is, in fact, a total threat. It is not limited to military forces. It embraces every activity which can in any way contribute to the Communist objective of world domination, the unchanging goal to which this ideology is dedicated and toward which it moves on all fronts, sometimes checkmated, sometimes reversed, but always pressing forward. Our security involves all the areas of human endeavor which at one time or other must come to grips with this formidable adversary.

In the years which have elapsed since the last great war 700,000,000 Asians have fallen into the Communist orbit and 100,000,000 people in Central Europe have been swallowed up while the Soviet Union has forged ahead to expand its industrial, economic, military and political strength. Today a tightly-knit Communist empire stretches from Berlin to the South China Seas, challenging the Free World at every turn.

MORE

A French writer, Amaury de Riancourt, addressed himself to the question of what has happened to the West that this disastrous change in the balance of power, which has in part halted mankind's progress towards the better life, should have come to pass without counteraction. He commented that the "answer stares at us, it is so obvious that we simply overlook it. The answer is that the Communist world has a strong faith to live by, an overall philosophy to guide its actions, a definite goal to look forward to and a will to achieve it." By contrast, he believes, the West has turned its back on its past and has no spiritual aim.

I do not quarrel with his explanation of Communist gains--the facts support it. I believe that in this summary of the situation we may find a challenge to the women of America who seek their proper place in a swiftly changing world. It takes a certain amount of courage, of course, or just plain foolhardiness, to tell any woman what she ought to do so my emotions are somewhat mixed as I attempt it.

Here I should like to distinguish between those women who seek to participate personally in the scientific and technical developments related to the Space Age, and those who by force of circumstance or otherwise must make a less direct contribution which may nevertheless be equally valuable.

The honored maxim about woman's place in the home may sound a little strange at a time when we hear, see and read of interplanetary voyages, when we look forward to excursions at lunar spas, when every movie house features gruesome chillers about monsters descending upon Earth from unknown lairs in the outer galaxies. Yet if ever there was a period when the affection, inspiration and guidance of a mother could help her child's development, it is the troubled age in which

we live. In too many homes parental responsibility has been sloughed off and delegated to the public school with the result that at best, time which should be devoted to academic preparation must be taken up by teaching children how to live with others.

Remembering that education must prepare youth for the kind of society which will exist 10 or 15 years hence, we must expect the educational process to anticipate and provide the requirements of the future. Those requirements are clearly definable now for the impact of science and technology requires at least a fundamental understanding of mathematics and the physical sciences by all our citizens. Not all boys and girls are destined to become engineers and scientists, but if they are to understand the environment in which they will live, they must have an appreciation for the natural laws which will influence their existence more than ever before. Logically, the school should be relieved of additional burdens not related to academic preparation. The place to put them is back into the American home which must be restored to its rightful position.

One can reason these things with little effort but it is more difficult to explain how they can be achieved. A solution may be found in the persuasive influence of mature women upon young mothers, or upon girls emerging into womanhood, who can emphasize the important role which the homemaker plays in shaping the destiny of her child. We have not reached the point, and I hope we never shall, at which the relationship of mother and child can be entrusted to the impersonal clinic. That smacks of the all-knowing state. By the expression of her own interests and enthusiasm the mother can arouse a child's curiosity into those areas which will be most rewarding to the growing

MORE

man or woman. My first telescope was a gift from my mother whose encouragement had more to do with the shaping of my life than any other single factor.

It is to the home, too, that we must look to instill in young minds a respect for the basic facts of existence--respect for truth, for initiative, for knowledge, for the satisfaction and reward which can only be obtained from the individual's effort. These are homely ideals but they are equally as valid today and tomorrow as they were before the first satellite appeared in our skies. Elementary principles have somehow been forgotten in the exciting and pleasurable niceties of our high standard of living. But science has not discovered a substitute for a mother's inspiration. It can be one of our strongest bulwarks; its absence can be one of our most tragic weaknesses.

Today's school teacher occupies a position second only to motherhood, in my opinion, in potential importance to the future of our nation. She can gently fan the spark of creativity and by her wise counsel, help encourage the child to develop his potential in whatever field it may lie so that he can find his place in society and make his maximum contribution. She can also guide the development of the critical faculty which enables the individual to come to his own understanding of good and evil, of wise and unwise, useful and useless.

For the young woman caught up in the enthusiasm with which youth has embraced rocketry and the exciting prospect of outer space exploration, who wants to share in this intriguing activity, there are

MORE



many opportunities for participation. One out of every four persons employed in the Army's missile and space projects is a woman. Many of them are truly pioneers in every sense of the word. Some have professional and scientific backgrounds and are working as mathematicians, physicists, chemists, accountants, laboratory assistants and similar occupations. Some actually plot trajectories for satellites and deep space probes. Others calculate the anticipated and actual flight performances of ballistic missiles.

Employment in enterprises associated with the burgeoning missile industry, to which about \$7,000,000,000 has been budgeted by the President for the next fiscal year, by no means exhaust the possibilities open to your sex. Nor should it be regarded as an exact indication of the broad influence of space-oriented programs upon our daily lives. Words once familiar only to a handful of scientists have become part of everyday language and conversation--"orbit", "satellite", "rocket" are used to explain things as well as to sell all kinds of consumer products. The arts have also reflected the influence of rocketry--witness the motion picture, television, radio, newspaper, magazine and book publishing industries. The legendary Whan Hoo, a Chinese who first experimented with rocket propulsion to his doom in 1225 A.D., would look askance at what has become of his playthings!

As we regard the future, we must anticipate that the kaleidoscopic happenings of recent years, caused in no small measure by technology, will continue to increase the confusion out of which you are trying to derive order. As his environment undergoes drastic changes man

MORE

will sorely need a rock of security upon which to stand against the vicissitudes of strange hypotheses and radical philosophies spawned by new discoveries. He must remain mentally flexible, developing the ability to grasp and interpret totally unprecedented things in order to react to them intelligently.

I believe we must identify this need as 'synonymous with religious faith. Unless he will accept divine guidance, man may be tempted to use for evil purposes the tremendous energies placed at his disposal, to exploit space with aggressive designs, to attempt domination of the Earth through conquest of the Universe.

The first ventures into regions beyond the sensible atmosphere have produced new knowledge which points up the beauty and order of creation, which verifies the natural laws governing all life, and which logically should enhance our reverence. Man will need the understanding help of woman in the intelligent interpretation of these and other revelations which follow in due course as evidences of God's immense plan.

#

#

#